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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

May 12, 2017

Ken Fleck, Manager of Geology and Environmental Affairs  
Interwest Mining Company  
P.O. Box 310  
Huntington, Utah 84528

Subject: 2016 Annual Report Review Completion, Deer Creek Mine, C/015/0018, Task #5410

Dear Mr. Fleck:

The Division staff has completed the review of the 2016 Annual Report. Enclosed is a copy of the review with each reviewer's comments.

Thank you for your diligence in completing the Annual Report. If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen  
Permit Supervisor

SKC/sqs  
Enclosure  
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# Annual Report

This Annual Report shows information the Division has for your mine. Submit the completed document and any additional information identified in the Appendices to the Division by the date specified in the cover letter. During a complete inspection an inspector will check and verify the information.

## GENERAL INFORMATION

Company Name Mine Name Permit Number Permit expiration Date Operator Name Phone Number Mailing Address Email City State  Zip Code 

## DOGM File Location or Annual Report Location

Excess Spoil Piles

☐ Required☒ Not Required

Refuse Piles

☒ Required☐ Not Required

Impoundments

☒ Required☐ Not Required

Other:

Refer to Attachment A

Refer to Attachment A

## OPERATOR COMMENTS

In August 2015, the Deer Creek Waste Rock Site was transferred to Bowie Refined Coals LLC. To this date, Interwest Mining is waiting for the Division approval for the transfer of the permit to BRC.

## REVIEWER COMMENTS



Met Requirements



Did Not meet Requirements

The annual report meets the State of Utah R645 requirements for Hydrology.

The Deer Creek annual report updates the 2016 Annual Hydrologic Report. Five spring water monitoring sites were released in 2016 from the water monitoring program. The hydrologic report summarizes the 2016 water year for the local and regional climate patterns. The quality and quantity of surface and groundwater is analyzed and summarized in narratives and graphs.

## COMMITMENTS AND CONDITIONS

The Permittee is responsible for ensuring annual technical commitments in the Mining and Reclamation Plan and conditions accepted with the permit are completed throughout the year. The Division has identified these commitments below and has provided space for you to report what you have done during the past year for each commitment. If additional written response is required, it should be filed as an attachment to this report.

### Title: **RAPTORS**

**Objective:** To document the location and activity of nests that could be affected by mining.

**Frequency:** annually

**Status:** Ongoing

**Reports:** Submit annually in annual report.

**Citation:** MRP, Section 322, Subsection Terrestrial Species.

Operator Comments

Reviewer Comments   ☐ Met Requirements   ☒ Did Not Meet Requirements

Permittee did not complete raptor survey as required. Since the 2016 survey can't be conducted, a hindrance violation will be issued. The Rilda Canyon Surface Facilities are located within a 1/2 mile of three raptor nests (see Vol. 1, page 2-210.6) and therefore an annual raptor survey is warranted. Since mining has ceased, and if monitoring data indicates subsidence has ceased, raptor surveys beyond the 1/2 mile buffer of disturbance areas is no longer necessary. (LR 4/7/17.)

### Title: **SUBSIDENCE MONITORING REPORT**

**Objective:** To Determine the effects of subsidence

**Frequency:** Annually

**Status:** Ongoing

**Reports:** Submit in annual report

**Citation:** MRP, Volume 3, Appendix X

Operator Comments

Interwest Mining conducts subsidence monitoring annually over areas that could be potentially impacted by underground mining activities. The last date of production for the Deer Creek Mine was January 7, 2015. Theoretically, the last subsidence survey should occur during the field season of 2018.

Reviewer Comments   ☒ Met Requirements   ☐ Did Not Meet Requirements

**Title: Wildlife**

**Objective:** Adhere to wildlife exclusionary periods during reclamation activities

**Frequency:** During Reclamation

**Status:** Reclamation Pending

**Reports:** Not Required

**Citation:** MRP, Section 322, page 10; Section 330, page 16 #14; Section 342, page 32, #7

Operator Comments

No reclamation activities have commence to this date.

Reviewer Comments ☒ Met Requirements

☐ Did Not Meet Requirements

As reclamation is nearing, please be aware of any timing stipulations that may be place during construction activities.

**Title: DEMONSTRATION OF SELECTED OVERBURDEN AS BEST AVAILABLE MATERIAL IN THE PERMIT AREA FOR USE AS SUBSTITUTE TOPSOIL.**

**Objective:** Monitor chemical quality of identified substitute topsoil to show reduction in sodicity.

**Frequency:** Sampling will occur once within each permit term until such time as the soils are found acceptable for substitute topsoil use. The last sample, collected in 2010, did not show suitability. The current permit term is 2011-2016.

**Status:** To be conducted once in current permit term (2011-Feb 2016).

**Reports:** Annual Report

**Citation:** MRP, Volume 2, Part 4, section R645-301-233, page 2-3

Operator Comments

The last soil sampling was conducted in the 3rd quarter of 2014 and reported in the 2014 annual report. Refer to this report for pertinent data.

Reviewer Comments ☒ Met Requirements

☐ Did Not Meet Requirements

4/4/2017, PB. In 2014, four composite samples from two locations and two depths were analyzed. Samples from location DC0114 and CD0214 representing the depth intervals 0-3ft and 3-5ft were sandy loam in texture, slightly alkaline pH, EC values of 1.71 and 6.31 dS/m and corresponding SAR values of 3.11 and 5.02. Soils from 0-5 ft depth at this sample location are suitable. The second location is represented by samples DC0314 (0-3 ft) and DC0414 (3-5 ft). These samples were sandy loam to loam in texture with alkaline pH (8.4 - 8.2), EC values of 1.5 and 4.21 dS/m, and corresponding SAR values of 10.5 and 15.3. The SAR values in samples DC0314 and DC0414 places them in the fair category for suitability.

## FUTURE COMMITMENTS AND CONDITIONS

The following commitments are not required for the current annual report year, but will be required by the permittee in the future as indicated by the "status" field. These commitments are included for information only, and do not currently require action. If you feel that the commitment is no longer relevant or needs to be revised, please contact the Division.

**Title: SUBSOIL TESTING**

**Objective:** Regraded subsoil will be sampled on 500 ft intervals to a depth of four feet (three or four samples for the 2,000 linear feet in the facilities area). The samples will be analyzed on site for pH and EC. Problem areas will be further sampled and sent to a laboratory of analysis.

**Frequency:** At final regrading

**Status:** Ongoing at reclamation

**Reports:** Laboratory analysis to be provided to the Division

**Citation:** MRP, Volume 11, Section R645-301-231.300

**Title: TOPSOIL HANDLING TESTING PLAN**

**Objective:** Three composite samples will be taken from the facilities area and sediment pond. Samples will be analyzed for parameters to be compared with baseline information and to determine the need for amendments, including fertilizer.

**Frequency:** Final Reclamation

**Status:** Ongoing

**Reports:** Analysis to be provided to the Division

**Citation:** MRP, Volume 11, Section R645-301-242

**Title: WASTE ROCK SITE RECLAMATION SAMPLING**

**Objective:** Monitor chemical quality of upper four feet of final waste reclaimed surface at waste rock site.

**Frequency:** Grab samples within four feet of final elevation at a rate of two samples per acre per lift. Parameters as described.

**Status:** At final reclamation of waste rock cell.

**Reports:** Annual report

**Citation:** MRP, Volume 10, Chapter 7, page 7-5

**Title: FISH & MACROINVERTEBRATE MONITORING**

**Objective:** Monitor the fish and macroinvertebrates in Rilda Creek

**Frequency:** Spring/fall two years prior to and spring/fall one year immediately following start of construction. Spring every three years during operations and reclamation.

**Status:** Construction complete in fall 2008. Spring and Fall 2009 surveys complete. 2011 & 2014 surveys complete. Next survey expected for Spring 2017.

**Reports:** Annual Report

**Citation:** MRP, Volume 11, Biology Section, page 25.

**Title: REFERENCE VEGETATION SAMPLING**

**Objective:** Ensure that veg reference areas remain appropriate for comparison at time of reclamation.

**Frequency:** Reference area qualitative and quantitative monitoring will continue on a five year interval through mine reclamation and bond release.

**Status:** Next sampling to be conducted in 2017

**Reports:** Annual Report

**Citation:** MRP, Volume 1, Vegetation Monitoring Plan, page 2-174, paragraphs 4 & 5.

**OPERATOR COMMENTS (OPTIONAL)**

The vegetation monitoring for all reference areas was conducted in 2016 and is reported in Attachment B.

**REVIEWER COMMENTS**

Mt. Nebo Scientific conducted vegetation monitoring of the reference areas in 2016. Raw data and photos are located on pages 5 through 24. (LR 4/4/17)

## REPORTING OF OTHER TECHNICAL DATA

Please list other technical data or information that was not included in the form above, but is required under the approved plan, which must be periodically submitted to the Division.

Reviewer Comments

Please List Attachments

Attachment A Inspection reports for the refuse piles and impoundments. Attachment B Vegetation Monitoring

# MAPS

Copies of mine maps, current and up-to-date, are to be provided to the Division as an attachment to this report in accordance with the requirements of R645-301-525.240. The map copies shall be made in accordance with 30 CFR 75.1200 as required by MSHA. Mine maps are not considered confidential.

Map Name	Map Number	Included		Confidential	
		Yes	No	Yes	No
Annual subsidence map		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mine Map		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Raptor survey within permit boundary	NA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reviewer Comments ☐ Met Requirements ☐ Did Not Meet Requirements